



# 2000 Index

## IEEE Transactions on Knowledge and Data Engineering

### Vol. 12

This index covers all technical items - papers, correspondence, reviews, etc. that appeared in this periodical during 2000, and items from previous years that were commented upon or corrected in 2000. In the case of magazines, departments and other items may be also covered if they have been judged to have archival value.

The Author Index contains the primary entry for each item, listed under the first author's name. The primary entry includes the coauthors' names, the title of the paper or other item, and its location, specified by the publication abbreviation, year, month, and inclusive pagination. The Subject Index contains entries describing the item under all appropriate subject headings, plus the first author's name, the publication abbreviation, month, and year, and inclusive pages. Subject cross-references are included to assist in finding items of interest. Note that the item title is found only under the primary entry in the Author Index.

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**Bandwidth allocation**

distributed multimedia-on-demand systs., load sharing. *Tay, Y.C.*, +, *T-KDE May-Jun 00* 410-428

**Behavioral sciences; cf.** Psychology**Belief networks**

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**Biology; cf.** Cardiology**Boolean algebra; cf.** Boolean functions**Boolean functions**

LAD ("logical anal. of data") methodology, implement. *Bores, E.*, +, *T-KDE Mar-Apr 00* 292-306

**Broadcasting**

adaptive access method for broadcast data under error-prone mobile environ. *Shih-Chih Lo*, +, *T-KDE Jul-Aug 00* 609-620

## C

**Cardiology**

med. diagnosis, incomplete/partially correct stats. *Nikovski, D.*, *T-KDE Jul-Aug 00* 509-516

**Client-server systems**

proc. coord., survivable, in large distributed systs., scalable archit. *Malkhi, D.*, +, *T-KDE Mar-Apr 00* 187-202  
Web-based inform. sources, dyn. interacts. *Bouguettaya, A.*, +, *T-KDE Sep-Oct 00* 779-801  
WWW distributed database, access, mobile agents. *Papastavrou, S.*, +, *T-KDE Sep-Oct 00* 802-820

**Combinatorial mathematics; cf.** Graph theory**Common-sense reasoning**

Disjunctive Datalog, constraints. *Buccafurri, F.*, +, *T-KDE Sep-Oct 00* 845-860

**Computational complexity**

act. spatial data mining based on stat. inform. *Wang, W.*, +, *T-KDE Sep-Oct 00* 715-728  
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**Computational geometry**

nearest neighbor search in high-dimens. space. *Berchtold, S.*, +, *T-KDE Jan-Feb 00* 45-57

**Computational linguistics; cf.** Programming language semantics**Computer applications; cf.** Information systems; Multimedia systems**Computer architecture; cf.** Reconfigurable architectures**Computer network management**

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**Computer network reliability**

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**Computer networks; cf.** Computer network management; Computer network reliability**Concurrency control**

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**Configuration management**

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**Constraint handling**

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**Costing**

message-logging protocols, recovery cost. *Rao, S.*, +, *T-KDE Mar-Apr 00* 160-173

**Cybernetics; cf.** Economic cybernetics

## D

**Data analysis**

LAD ("logical anal. of data") methodology, implement. *Bores, E.*, +, *T-KDE Mar-Apr 00* 292-306

**Database indexing**

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**Database languages**

view operations on objs. with roles for statically typed DBMS lang. *Albano, A.*, +, *T-KDE Jul-Aug 00* 548-567

**Database languages; cf.** Query languages**Database management systems**

integrating security and real-time requirements using covert channel capacity. *Son, S.H.*, +, *T-KDE Nov-Dec 00* 865-879

**Database management systems; cf.** Active databases; Database indexing; Deductive databases; Distributed databases; Multimedia databases; Object-oriented databases; Relational databases; Temporal databases; Very large databases; Visual databases**Database theory**

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#### Data handling

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#### Data handling; cf. Associative processing; Data analysis; Merging; Sorting

#### Data integrity

- inclusion dependency normal form, semantic justification. *Levene, M., +, T-KDE Mar-Apr 00 281-291*
- obj. databases, logic based query optim. *Grant, J., +, T-KDE Jul-Aug 00 529-547*

#### DATALOG

- Disjunctive Datalog, constraints. *Buccafurri, F., +, T-KDE Sep-Oct 00 845-860*

#### Data loggers

- message-logging protocols, recovery cost. *Rao, S., +, T-KDE Mar-Apr 00 160-173*

#### Data mining

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#### Data mining

- act. spatial data mining based on stat. inform. *Wang, W., +, T-KDE Sep-Oct 00 715-728*
- data querying based on similarity. *Rafiei, D., +, T-KDE Sep-Oct 00 675-693*
- LAD ("logical anal. of data") methodology, implement. *Bores, E., +, T-KDE Mar-Apr 00 292-306*
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- scalable parallel data mining for assoc. rules. *Eui-Hong Han, +, T-KDE May-Jun 00 337-352*
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#### Data models

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- obj. databases, logic based query optim. *Grant, J., +, T-KDE Jul-Aug 00 529-547*
- view operations on objs. with roles for statically typed DBMS lang. *Albano, A., +, T-KDE Jul-Aug 00 548-567*

#### Data structures

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- distributed appls., integrated checkpointing and recovery scheme, design and anal. *Ramamurthy, B., +, T-KDE Mar-Apr 00 174-186*
- proc. coord., survivable, in large distributed systs., scalable archit. *Malkhi D., +, T-KDE Mar-Apr 00 187-202*

#### Data structures; cf. Data models; Spatial data structures; Tree data structures

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- data querying based on similarity. *Rafiei, D., +, T-KDE Sep-Oct 00 675-693*

#### Decision support systems

- LAD ("logical anal. of data") methodology, implement. *Bores, E., +, T-KDE Mar-Apr 00 292-306*
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- Disjunctive Datalog, constraints. *Buccafurri, F., +, T-KDE Sep-Oct 00 845-860*
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- natural lang. grammatical inference with recurrent neural nets. *Lawrence S., +, T-KDE Jan-Feb 00 126-140*

#### Digital simulation; cf. Virtual machines

#### Digital systems; cf. Multiprocessing systems; Real-time systems

#### Directed graphs; cf. Belief networks

#### Diseases

- diagnosis, incomplete/partially correct stats. *Nikovski, D., T-KDE Jul-Aug 00 509-516*

#### Disk storage; cf. Magnetic disk storage; Optical disk storage

#### Distributed algorithms

- checkpointing and recovery, integrated scheme for distributed appls., design and anal. *Ramamurthy, B., +, T-KDE Mar-Apr 00 174-186*

#### Distributed algorithms; cf. Parallel algorithms

#### Distributed databases

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- vague query proc. in distributed obj. mgt. systs. *Haase, O., +, T-KDE May-Jun 00 448-467*
- Web-based inform. sources, dyn. interacts. *Bouguettaya, A., +, T-KDE Sep-Oct 00 779-801*
- WWW distributed database, access, mobile agents. *Papastavrou, S., +, T-KDE Sep-Oct 00 802-820*

#### Distributed databases; cf. Parallel databases; Replicated databases

#### Distributed object management

- distributed obj. mgt. systs., vague query proc. *Haase, O., +, T-KDE May-Jun 00 448-467*
- PSTR/SNS scheme for real-time fault tolerance via act. obj. replication and network surveillance. *Kim, K.H., +, T-KDE Mar-Apr 00 145-159*
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- fault tolerance environ., software-implemented, hierarchical error detect. framework. *Bagchi, S., +, T-KDE Mar-Apr 00 203-224*
- load sharing in distributed multimedia-on-demand systs. *Tay, Y.C., +, T-KDE May-Jun 00 410-428*
- message-logging protocols, recovery cost. *Rao, S., +, T-KDE Mar-Apr 00 160-173*



**Distributed processing; cf.** Client-server systems; Distributed algorithms; Distributed databases; Distributed object management; Mobile computing; Multiprocessing systems; Network operating systems; Remote procedure calls

## E

**Economic cybernetics**

LAD ("logical anal. of data") methodology, implement. Bores, E., + , *T-KDE Mar-Apr 00* 292-306

**Electronic messaging**

message-logging protocols, recovery cost. Rao, S., + , *T-KDE Mar-Apr 00* 160-173

**Engineering computing; cf.** Virtual machines**Equivalence classes**

scalable algms. for assoc. mining. Zaki, M.J., *T-KDE May-Jun 00* 372-390

**Error detection**

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fault tolerance environ., software-implemented, hierarchical error detect. framework. Bagchi, S., + , *T-KDE Mar-Apr 00* 203-224

## F

**Fault tolerance; cf.** Fault tolerant computing**Fault tolerant computing**

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broadcast data, adaptive access method under error-prone mobile environ. Shih-Chih Lo, + , *T-KDE Jul-Aug 00* 609-620

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**Fault tolerant computing; cf.** Software fault tolerance**Feature extraction**

LAD ("logical anal. of data") methodology, implement. Bores, E., + , *T-KDE Mar-Apr 00* 292-306

**Feedback**

integrating security and real-time requirements using covert channel capacity. Son, S.H., + , *T-KDE Nov-Dec 00* 865-879

**File organization; cf.** Data structures**Finance; cf.** Costing**Finite automata; cf.** Finite state machines**Finite state machines**

natural lang. grammatical inference with recurrent neural nets. Lawrence, S., + , *T-KDE Jan-Feb 00* 126-140

**Formal logic; cf.** Boolean functions; Temporal logic**Formal verification; cf.** Program verification**Fourier series**

time series data querying based on similarity. Rafiei, D., + , *T-KDE Sep-Oct 00* 675-693

**Functions; cf.** Boolean functions**Fuzzy set theory**

equi-join, efficient eval. using fuzzy equality indicators. Weining Zhang, + , *T-KDE Mar-Apr 00* 225-237

vague query proc. in distributed obj. mgt. systs. Haase, O., + , *T-KDE May-Jun 00* 448-467

## G

**Geometry; cf.** Computational geometry**Grammars**

natural lang. grammatical inference with recurrent neural nets. Lawrence, S., + , *T-KDE Jan-Feb 00* 126-140

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**Graph theory**

schema version removal, consistent, optim. tech. for OO views.

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subgraph isomorphism detect., decomp. Messmer, B.T., + , *T-KDE Mar-Apr 00* 307-323

**Graph theory; cf.** Trees (mathematics)

## H

**Heterogeneous databases; cf.** Distributed databases**High level languages; cf.** Object-oriented languages**Humanities; cf.** Linguistics**Hypermedia**

large heterog. inform. base access via taxonomic model. Sacco, G., *T-KDE May-Jun 00* 468-479

## I

**Image retrieval; cf.** Content-based retrieval**Indexing; cf.** Database indexing**Inference mechanisms**

natural lang. grammatical inference with recurrent neural nets. Lawrence, S., + , *T-KDE Jan-Feb 00* 126-140

secure databases, constraints, inference channels, and monitoring disclosures. Brodsky, A., + , *T-KDE Nov-Dec 00* 900-919

**Inference mechanisms; cf.** Common-sense reasoning; Nonmonotonic reasoning**Information networks; cf.** Internet**Information resources**

query rewriting for swift (first) answers. Kian-Lee Tan, + , *T-KDE Sep-Oct 00* 694-714

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WWW distributed database, access, mobile agents. Papastavrou, S., + , *T-KDE Sep-Oct 00* 802-820

**Information retrieval**

large heterog. inform. base access via taxonomic model. Sacco, G., *T-KDE May-Jun 00* 468-479

semistructured data, structural assoc. discovery. Ke Wang, + , *T-KDE May-Jun 00* 353-371

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**Information retrieval; cf.** Query formulation; Query processing**Information science; cf.** Information retrieval**Information services; cf.** Information resources**Information systems**

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**Information systems; cf.** Database management systems; Medical information systems**Inheritance**

act. obj. database syst., trigger inheritance and overriding. Bertino, E., + , *T-KDE Jul-Aug 00* 588-608

**Interactive systems**

large heterog. inform. base access via taxonomic model. Sacco, G., *T-KDE May-Jun 00* 468-479

**Internet**

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query rewriting for swift (first) answers. Kian-Lee Tan, + , *T-KDE Sep-Oct 00* 694-714



## J

## Java

- Web-based inform. sources, dyn. interacts. *Bouguettaya, A.*, +, *T-KDE Sep-Oct 00* 779-801
- WWW distributed database, access, mobile agents. *Papastavrou, S.*, +, *T-KDE Sep-Oct 00* 802-820

## K

## Knowledge acquisition

- probab. elicitation, expert inconsistency. *Monti, S.*, +, *T-KDE Jul-Aug 00* 499-508

## Knowledge acquisition; cf. Data mining

## Knowledge based systems

- content-based access of video, database approach for modeling/querying video data. *Hacid, M.-S.*, +, *T-KDE Sep-Oct 00* 729-750
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- response time anal. of OPS5 prod. systs. *Albert Mo Kim Cheng*, *T-KDE May-Jun 00* 391-409

## Knowledge based systems; cf. Software agents

## Knowledge engineering; cf. Inference mechanisms; Knowledge acquisition

## Knowledge representation; cf. Belief networks

## L

## Languages; cf. Natural languages

## Learning (artificial intelligence)

- LAD ("logical anal. of data") methodology, implement. *Bores, E.*, +, *T-KDE Mar-Apr 00* 292-306

## Learning (artificial intelligence); cf. Backpropagation

## Linguistics

- natural lang. grammatical inference with recurrent neural nets. *Lawrence, S.*, +, *T-KDE Jan-Feb 00* 126-140

## Logic; cf. Logic programming

## Logic programming

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## Logic programming; cf. Constraint handling

## Logic programming languages; cf. DATALOG

## M

## Magnetic disk storage

- multizoned disks, optimal data placement. *Triantafillou, P.*, +, *T-KDE Mar-Apr 00* 324-330

## Magnetic storage; cf. Magnetic disk storage

## Mathematical analysis; cf. Numerical analysis

## Mathematics; cf. Equivalence classes; Optimization; Probability

## Medical administrative data processing; cf. Medical information systems

## Medical computing; cf. Medical diagnostic computing; Medical information systems; Medical signal processing

## Medical diagnostic computing

- diagnosis, incomplete/partially correct stats. *Nikovski, D.*, *T-KDE Jul-Aug 00* 509-516

## Medical information systems

- causal probabilistic network for optimal treatment of bacterial infections. *Leibovici, L.*, +, *T-KDE Jul-Aug 00* 517-528
- semantic query optim. for query plans of heterog. multidatabase systs. *Hsu, C.-N.*, +, *T-KDE Nov-Dec 00* 959-978

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## Medicine; cf. Diseases

## Merging

- fuzzy equi-join, efficient eval. using fuzzy equality indicators. *Weining Zhang*, +, *T-KDE Mar-Apr 00* 225-237

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## Microcomputers; cf. Portable computers

## Microorganisms

- causal probabilistic network for optimal treatment of bacterial infections. *Leibovici, L.*, +, *T-KDE Jul-Aug 00* 517-528

## Minimization

- distributed appls., integrated checkpointing and recovery scheme, design and anal. *Ramamurthy, B.*, +, *T-KDE Mar-Apr 00* 174-186
- fault tolerance environ., software-implemented, hierarchical error detection framework. *Bagchi, S.*, +, *T-KDE Mar-Apr 00* 203-224

## Mobile computing

- broadcast data, adaptive access method under error-prone mobile environment. *Shih-Chih Lo*, +, *T-KDE Jul-Aug 00* 609-620

## Modeling; cf. Data models; User modeling

## Monitoring; cf. Patient monitoring

## Multidatabase systems; cf. Distributed databases

## Multimedia computing; cf. Multimedia databases

## Multimedia databases

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- 14th International Conference on Data Engineering, expanded selected papers on spatial databases, special section intro. *Bertino, E.*, +, *T-KDE Jan-Feb 00* 1-2
- large heterog. inform. base access via taxonomic model. *Sacco, G.*, *T-KDE May-Jun 00* 468-479
- MPGS interactive tool for multimedia presentation generation. *Bertino, E.*, +, *T-KDE Jan-Feb 00* 102-125
- nearest neighbor search in high-dimens. space. *Berchtold, S.*, +, *T-KDE Jan-Feb 00* 45-57
- sync classes, optimal request scheduling in multimedia storage servers. *Golubchik, L.*, +, *T-KDE Jan-Feb 00* 60-77

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- selected papers on resource management, special section intro. *Bertino, E.*, +, *T-KDE Jan-Feb 00* 58-59

## Multimedia servers

- distributed multimedia-on-demand systs., load sharing. *Tay, Y.C.*, +, *T-KDE May-Jun 00* 410-428
- sync classes, optimal request scheduling in multimedia storage servers. *Golubchik, L.*, +, *T-KDE Jan-Feb 00* 60-77

## Multimedia systems

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- dyn. negotiated resource mgt., data intensive appl. suites. *Nutt, G.J.*, +, *T-KDE Jan-Feb 00* 78-95

## Multimedia systems; cf. Hypermedia

## Multiprocessing systems

- MDARTS, multiprocessor database archit. for hard real time systs. *Lortz, V.B.*, +, *T-KDE Jul-Aug 00* 621-644

## Multiprocessing systems; cf. Shared memory systems

## N

## Natural languages

- grammatical inference with recurrent neural nets. *Lawrence, S.*, +, *T-KDE Jan-Feb 00* 126-140

## Network operating systems

- PSTR/SNS scheme for real-time fault tolerance via act. obj. replication and network surveillance. *Kim, K.H.*, +, *T-KDE Mar-Apr 00* 145-159

## Network servers; cf. Multimedia servers

## Neural nets; cf. Recurrent neural nets

## Nonmonotonic reasoning

- Disjunctive Datalog, constraints. *Buccafurri, F.*, +, *T-KDE Sep-Oct 00* 845-860



**Numerical analysis**

LAD ("logical anal. of data") methodology, implement. *Bores, E., + , T-KDE Mar-Apr 00 292-306*

**O****Object-oriented databases**

act. obj. database syst., trigger inheritance and overriding. *Bertino, E., + , T-KDE Jul-Aug 00 588-608*

E-DEVICE, extensible act. knowledge base syst. *Bassiliades, N., + , T-KDE Sep-Oct 00 824-844*

logic based query optim. for obj. databases. *Grant, J., + , T-KDE Jul-Aug 00 529-547*

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view operations on objs. with roles for statically typed DBMS lang. *Albano, A., + , T-KDE Jul-Aug 00 548-567*

**Object-oriented languages**

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### Replicated databases

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- ASEP, secure and flexible commit protocol for MLS distributed database systs. *Ray, I.*, +, *T-KDE Nov-Dec 00 880-899*
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